*"Our state-of-the-art plant has established Total Corbion PLA as a world-scale PLA bio-plastic producer, ideally located to serve growing markets from Asia Pacific to Europe and the Americas"*

- Stephane Dion
CEO of Total Corbion PLA

# TOTAL CORBION PLA

## Producing Bioplastics for A Sustainable Future

Total Corbion PLA is a global technology leader in Poly Lactic Acid (PLA) and lactide monomer production. PLA is a fully bio-based and biodegradable polymer made from Thai sugarcane instead of the petroleum-based feed-stock of traditional polymers. It therefore offers a 100% renewable alternative with a greatly reduced carbon footprint versus more traditional plastics. Their Luminy® PLA portfolio features both high heat and standard PLA grades, and is an innovative material that is used in a wide range of markets from packaging to consumer goods, fibers and automotive parts. As PLA is a completely biodegradable polymer, it provides several sustainable end-of-life options, including industrial composting, bio-gas plant treatment, and recycling. Because it is both as durable and versatile as conventional plastic polymers, while offering a greener alternative to those other products, PLA sales have been growing and expanding at a rate of 10 to 20% per year for the past decade. Market leading Total Corbion PLA, a 50/50 joint venture between Total and Corbion, is headquartered in the Netherlands, and operates a 75,000 tons per year PLA production facility in Rayong, Thailand.

## Why Thailand

Corbion started with its initial investment in Rayong, Thailand in 2005, with the construction of its first lactic acid plant, which has produced over 1 million tons of lactic acid since operations commenced in 2007. Following on the success of the lactic acid plant, Corbion invested in a 75 kiloton lactide plant, which opened in 2011. Total has been active in Thailand for 30 years, with operations covering multiple areas including geo-chemical exploration and the production and marketing of lubricants, special fluids, and specialty chemicals, as well as having investments in solar & renewable energies. Total and Corbion joined forces creating the Total Corbion PLA joint venture in 2017, purchasing the lactide plant and building a 75 kiloton PLA plant on the same site in Rayong, thereby creating a fully integrated production facility converting sugar to PLA. The Thailand Board of Investment (BOI) also been an active partner to Corbion, Total, and Total Corbion PLA in their development of sustainable

products through the promotion of a supportive investment environment.

Total Corbion explained that Thailand is an ideal location for the production of PLA due to "the abundance of responsibly grown sugar cane, the key raw material used for the production of Luminy® PLA, the ability to attract highly skilled staff, and its excellent infrastructure."

**Vision for the Future**

Total Corbion notes that *"Thailand is taking clear steps to implement a circular economic model which, together with the high availability of resources and labor, offers a stable basis for further expansion of PLA manufacturing in both the country and the region."* Demand for sustainable materials driven by the growing global consciousness regarding sustainability, combined with strong government support and attractive investment incentives make this an ideal time to invest in Thailand's circular economy. The circular economy is providing opportunities for Thailand to adopt new resource productivity principles, to improve sustainable product design, and to be leaders in sustainable manufacturing.

**Supporting Policies from the Government**

To promote Thailand as a regional biochemical industry hub, the government is providing continuous support to strengthen human resources, as well as supporting research and development by creating a strong collaborative network among educational institutions, research centers, and the private sector. Its major ongoing infrastructure expansion projects will further improve manufacturing companies ability to import raw materials and export finished products. Thai government policies are also being implemented to encourage circular economy focused investments, particularly in the Eastern Economic Corridor (EEC). These policies were presented at the November 2019 ASEAN Business and Investment Summit under the theme "Circular economy, waste management and sustainability" with the objective of expanding regional cooperation among the public and

private sectors to enhance trade and investment that support circularity.

**Attractive BOI Incentives**

The BOI offers a wide range of tax and non-tax incentives for projects that meet national development objectives. Tax-based incentives include an exemption or reduction of import duties on machinery and raw materials, as well as corporate income tax exemptions of up to eight years. Non-tax incentives include permission to bring in expatriates, own land and take or remit foreign currency abroad. Additional information about specific activities relating to the biochemical and biofuels industries can be found by clicking here or contacting the BOI's Investment Promotion Bureau 1.

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